

EXHIBIT

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Smith Economics Group, Ltd.

A Division of Corporate Financial Group

Economics / Finance / Litigation Support

*Stan V. Smith, Ph.D.
President*

July 26, 2019

Mr. John M. Eubanks
Motley Rice
28 Bridgeside Blvd.
Mt. Pleasant, SC 29464

Re: Larocque

Dear Mr. Eubanks:

You have asked me to calculate the value of certain losses subsequent to the death of Judith "Judy" Larocque. These losses are: (1) the loss of wages and employee benefits; (2) the loss of housekeeping and household management services; and (3) the loss of the value of life ("LVL"), also known as loss of enjoyment of life.

QUALIFICATIONS AND EXPERIENCE

I am President of Smith Economics Group, Ltd., headquartered in Chicago, IL, which provides economic and financial consulting nationwide. I have worked as an economic and financial consultant since 1974, after completing a Research Internship at the Federal Reserve, Board of Governors, in Washington, D.C. My curriculum vitae lists all my publications in the last 10 years and beyond.

I received my Bachelor's Degree from Cornell University. I received a Master's Degree and my Ph.D. in Economics from the University of Chicago; Gary S. Becker, Nobel Laureate 1992, was my Ph.D. thesis advisor. The University of Chicago is one of the world's preeminent institutions for the study of economics, and the home of renowned research in the law and economics movement.

As President of Smith Economics, I have performed economic analyses in a great variety of engagements, including damages analysis in personal injury and wrongful death cases, business valuation, financial analysis, antitrust, contract losses, a wide range of class action matters, employment discrimination, defamation, and intellectual property valuations including evaluations of reasonable royalty.

I have more than 40 years of experience in the field of economics. I am a member of various economic associations and served for three years as Vice President of the National Association of Forensic Economics (NAFE) which is the principal

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association in the field. I was also on the Board of Editors of the peer-reviewed journal, the Journal of Forensic Economics, for over a decade; I have also published scholarly articles in this journal. The JFE is the leading academic journal in the field of Forensic Economics.

I am the creator and founder of Ibbotson Associates' Stock, Bonds, Bills, and Inflation (SBBI) Yearbook, Quarterly, Monthly, and SBBI/PC Services. SBBI is currently published by Duff & Phelps and is also available on various Morningstar, Inc. software platforms. SBBI is widely relied upon and regarded as the most accepted and scholarly reference by the academic, actuarial and investment community, and in courts of law. The SBBI series, which acknowledges my "invaluable role" as having "originated the idea" while Managing Director at Ibbotson Associates, is generally regarded by academics in the field of finance as the most widely accepted source of statistics on the rates of return on investment securities.

I wrote the first textbook on Forensic Economic Damages that has been used in university courses in various states; as an adjunct professor, I created and taught the first course in Forensic Economics nationwide, at DePaul University in Chicago. I have performed economic analysis in many thousands of cases in almost every state since the early 1980s.

BACKGROUND

Judith Larocque was a 50.9-year-old, Caucasian female, who was born on [REDACTED], and died on September 11, 2001. Ms. Larocque's remaining life expectancy is estimated at 32.5 years. This data is from the National Center for Health Statistics, United States Life Tables, 2015, Vol. 67, No. 7, National Vital Statistics Reports, 2018. I assume an estimated trial or resolution date of January 1, 2020.

In order to perform this evaluation, I have reviewed the following materials: (1) tax records for Judith Larocque from 1998 through 2001; (2) the Market Perspectives, Inc. Business Plan dated Winter 2001; (3) the Resume of Judith Larocque; (4) the City of New York Certificate of Death for Judith Larocque; (5) the August 3, 2005 report of Donald Frankenfeld regarding Judith Larocque; and (6) the case information form.

My methodology for estimating the losses, which is explained below, is generally based on past wage growth, interest rates, and consumer prices, as well as studies regarding the value of life. The effective net discount rate using statistically average wage growth rates and statistically average discount rates is 0.25 percent.

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My estimate of the real wage growth rate is 1.00 percent per year. This growth rate is based on Business Sector, Hourly Compensation growth data from the Major Sector Productivity and Costs Index found at the U.S. Bureau of Labor Statistics website at www.bls.gov/data/home.htm, Series ID: PRS84006103, for the real increase in wages primarily for the last 20 years.

My estimate of the real discount rate is 1.25 percent per year. This discount rate is based on primarily the rate of return on short-term U.S. Treasury investment for the last 20 years. The data is from the statistical series H.15 Selected Interest Rates, published by the Board of Governors of the Federal Reserve System found at www.federalreserve.gov. This data is also published in the Economic Report of the President Table for "Bond yields and interest rates" for the real return on U.S. Treasury investments.

Estimates of real growth and discount rates are net of inflation based on the Consumer Price Index (CPI-U), published in monthly issues of the U.S. Bureau of Labor Statistics, CPI Detailed Report (Washington, D.C.: U.S. Government Printing Office) and available at the U.S. Bureau of Labor Statistics website at www.bls.gov/data/home.htm, Series ID: CUUR0000SA0. The rate of inflation for the past 20 years has been 2.16 percent.

I. LOSS OF WAGES AND EMPLOYEE BENEFITS - Annual Employment

Tables 1 through 9 and 10 through 18 show the loss of wages and benefits for Judith Larocque. Judith Larocque was the President and CEO of Market Perspectives, Inc. (MPI), a market research firm. In the Winter 2001 Market Perspectives Inc. Business Plan the firm states that it's "computer and web-based interactive surveys deliver 'actionable next steps' for business executives." The company identifies customers including IBM, HP, Canon, Sun Microsystems, NCR, and Kimberly-Clark Corporation. MPI claims a competitive advantage through a blend of research expertise, consultative skills, and interactive research tools. The business plan notes that MPI, which was founded in 1993, had 19 employees in 2001.

The Management Bio for Judith Larocque in the Business Plan states that Ms. Larocque was the Principal of Emergent Marketing prior to founding MPI in 1993, and also worked as Director of Marketing at Bolt Beranek and Newman. The Bio notes that Ms. Larocque directed over 500 market research studies since 1993, and as President she led "the delivery of innovative software products and research services for marketing executives, and corporate professionals."

The MPI Business Plan projects Gross Profit growth from \$744,000 in 1999 to \$984,000 estimated in 2000, \$3,211 estimated in 2001, and \$6,261 estimated in 2002. While Operating Profit was at a



loss of \$766,000 in 1999 the business plan projects profits to be \$315,000 per year by 2002.

In Scenario 1 I calculate the wage loss for Ms. Larocque based on her average real wages from 1998 through 2000 of \$123,309 in year 2000 dollars. The Scenario 1 wages are grown at the national average wage growth rate of 3.84 percent in 2001, 2.05 percent in 2002, 5.27 percent in 2003, 4.41 percent in 2004, 3.04 percent in 2005, 3.89 percent in 2006, 4.08 percent in 2007, 2.94 percent in 2008, 1.05 percent in 2009, 1.23 percent in 2010, 0.52 percent in 2011, 5.87 percent in 2012, zero percent in 2013, 2.57 percent in 2014, 2.46 percent in 2015, 2.14 percent in 2016, 3.01 percent in 2017, 2.92 percent in 2018, and an estimated national average wage growth rate of 3.0 percent in 2019 and 2020. Future wages are grown at a 1.0 percent real rate.

In Scenario 2 I calculate the wage loss for Ms. Larocque assuming that her wages grow based on the projected increase in gross and net profits in the MPI Business plan. The Scenario 2 wages are grown from her 1998 through 2000 average real wages of \$123,309 in year 2000 dollars to \$300,000 in 2005. The Scenario 2 wages are then grown at the national average wage growth rate of 3.89 percent in 2006, 4.08 percent in 2007, 2.94 percent in 2008, 1.05 percent in 2009, 1.23 percent in 2010, 0.52 percent in 2011, 5.87 percent in 2012, zero percent in 2013, 2.57 percent in 2014, 2.46 percent in 2015, 2.14 percent in 2016, 3.01 percent in 2017, 2.92 percent in 2018, and an estimated national average wage growth rate of 3.0 percent in 2019 and 2020. Future wages are grown at a 1.0 percent real rate.

Employee benefit estimates are based on data from the U.S. Department of Labor, Bureau of Labor Statistics, Employer Cost of Employee Compensation - December 2018, 2019, found at www.bls.gov/ect. I have assumed that employee benefits grow at the same rate as wages and are discounted to present value at the same discount rate. Since these tables assume annual work, I do not include employee benefits relating to unemployment, injury, illness or disability. Insurance benefits are illustrated at \$9,443 in year 2018 dollars based on the average annual employer insurance contribution for employees in the Management, Professional, and related fields. This is equal to 4.63 percent of Ms. Larocque's Scenario 1 wages which are estimated to be \$204,066 in 2018, and in Scenario 2 decrease from 4.02 percent of wages in 2001 to 2.28 percent wages in 2005 and thereafter based on Ms. Larocque's Scenario 2 2005 wages which are estimated to be \$413,681 in 2018. Retirement benefits in both scenarios are illustrated at 8.9 percent of wages based on the average for employees in the Management, Professional, and related fields. Legally-required employer Social Security contributions are illustrated at 6.2 percent of wages up to the annual maximum of which was \$80,400 in 2001, and \$90,000 in 2005. In Scenario 1 the employer Social Security contributions are estimated at 3.89

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percent of wages. In Scenario 2 the employer Social Security contributions are estimated at 3.38 percent of wages in 2001, 2.99 percent of wages in 2002, 2.57 percent of wages in 2003, 2.17 percent of wages in 2004, and 1.86 percent of wages in 2005 and thereafter. In Scenario 1 benefits are estimated at 17.42 percent of wages. In Scenario 2 benefits are estimated at 16.31 percent of wages in 2001, 15.33 percent of wages in 2002, 14.49 percent of wages in 2003, 13.72 percent of wages in 2004, and 13.04 percent of wages in 2005 and thereafter.

Personal consumption is an offset of the income. I use a personal consumption offset based on a study by Ruble, Patton, and Nelson, "Patton-Nelson Personal Consumption Tables 2011-12," Journal of Legal Economics, Vol. 21, No. 1, 2014, pp. 41-55, based on data from the U.S. Department of Labor, Bureau of Labor Statistics, "Consumer Expenditure Survey, 2011-12," Washington DC, 2012, which shows personal consumption in Scenario 1 to be 35.15 percent of wages. Personal consumption in Scenario 2 is 33.20 percent of wages.

I assume annual employment each year and show the accumulation through life expectancy. While these tables are calculated through the end of life expectancy, the losses from working through any age can be read off the table.

Based on the above assumptions, my opinion of the Scenario 1 loss is \$4,652,175 ► Table 9; this figure assumes work to age 83.4, but the ability to work through any assumed age may be read from Table 9; for example, the Scenario 1 loss to age 67 is \$2,058,591.

Based on the above assumptions, my opinion of the Scenario 2 loss is \$9,183,463 ► Table 18; this figure assumes work to age 83.4, but the ability to work through any assumed age may be read from Table 18; for example, the Scenario 2 loss to age 67 is \$3,969,960.

II. LOSS OF HOUSEHOLD/FAMILY HOUSEKEEPING AND HOUSEHOLD MANAGEMENT SERVICES

Tables 19 through 21 show the pecuniary loss of tangible housekeeping chores and household management services. The number of hours of housekeeping and household management services is 15.73 hours per week from 2001 through 2017 for females who work full-time, and 23.26 hours per week in 2018 and thereafter for retired females. This data is based on the American Time Use Survey published by the Bureau of Labor Statistics, www.bls.gov/tus, usefully summarized in a publication by Expectancy Data, The Dollar Value of A Day: 2017 Dollar Valuation, Shawnee Mission, KS, 2018.

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The hourly value of the housekeeping and household management services is based on the mean hourly earnings of painters, construction and maintenance; childcare workers; waiters and waitresses; cooks, private household; laundry and dry-cleaning workers; maids and housekeeping cleaners; landscaping and groundskeeping workers; bookkeeping, accounting and auditing clerks; and taxi drivers and chauffeurs, which is \$15.30 per hour in year 2018 dollars. This wage data is based on information from the U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2018 National Occupational Employment and Wage Statistics found at www.bls.gov/oes. This figure is corroborated by the average hourly values published by Expectancy Data, The Dollar Value of A Day: 2017 Dollar Valuation, Shawnee Mission, KS, 2018, which is also based on the BLS Occupational Employment Statistics.

I assess such services at their estimated market value which includes a conservative estimate of 50 percent hourly non-wage component reasonably charged by agencies or free-lance individuals who supply such services on a part-time basis, and who are responsible for advertising, hiring and vetting, training, insuring and bonding the part-time service provider, and who are also responsible for pay-related costs such as social security contributions, etc. If a person were to hire a free-lance employee directly instead of going through an agency, then he or she would have to take on the responsibility for all the non-wage costs that the agency would otherwise incur and then charge for. The money the person would pay directly in wages would be only a portion of the total costs. The total costs would include those items discussed above that the agency would otherwise incur.

Adding the non-wage component to the hourly wage is consistent with labor market theory and competitive market behavior. Peer-reviewed economic research supports this theory and shows that the non-wage costs can average up to 300 percent for the wage. See, for example, Cushing, Matthew J. and David I. Rosenbaum, "Valuing Household Services: A New Look at the Replacement Cost Approach," Journal of Legal Economics, Vol 19, No. 1, 2012, pp. 37-60, wherein the authors found that non-wage costs exceed wage costs by 167 percent. This is more than triple the 50 percent non-wage costs amount I use, discussed above. Also see Smith, David A., Stan V. Smith, and Stephanie R. Uhl, "Estimating the Value of Family Household Management Services: Approaches and Markups," Forensic Rehabilitation & Economics, Vol 3, No. 2, 2010, pp. 85-94. According to this research, the statistical probability is 99 percent that the non-wage costs exceed 250 percent of the wage cost. The use of only a 50 percent non-wage cost makes my estimate very conservative, and it far more than compensates for two possible variations: variations in the national wage depending on locality, and variations in different types of services actually performed in the household. Thus even

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if one or more of the different types of services are not performed, and even if the services are provided in low wage areas, my use of the low, 50 percent non-wage costs more than compensates for these factors.

According to Merry Maids, a national home cleaning service agency, the charges for their services within the largest 100 Metropolitan Statistical Areas with populations of 500,000 and up range from \$40 to \$65 per hour, averaging \$49 per hour, in 2012. This hourly rate reflects non-wage costs of 250 percent of wages, and after adjusting for market factors, is four times the non-wage costs figure that I use, resulting in an hourly rate of more than double the rate that I use. Thus my use of only a 50 percent addition for non-wage costs is, in fact, very conservative. The hourly value of these services grows at the same rate as the wage growth rate discussed above.

Based on these assumptions, and Judith Larocque's life expectancy of 83.4 years, my opinion of the loss of the value of housekeeping and household management services is \$711,643 ► Table 21.

III. LOSS OF VALUE OF LIFE

Tables 22 through 24 show the loss of the value of life. Economists have long agreed that life is valued at more than the lost earnings capacity. My estimate of the value of life is based on many economic studies on what we, as a contemporary society, actually pay to preserve the ability to lead a normal life. The studies examine incremental pay for risky occupations as well as a multitude of data regarding expenditure for life savings by individuals, industry, and state and federal agencies. Based on the average value of a statistical life and life expectancy of 83.4 years, my opinion of the loss of the value of life for Judith Larocque is \$4,125,268 ► Table 24.

My estimate of the value of life is consistent with estimates published in other studies that examine and review the broad spectrum of economic literature on the value of life. Among these is "The Plausible Range for the Value of Life," Journal of Forensic Economics, Vol. 3, No. 3, Fall 1990, pp. 17-39, by T. R. Miller. This study reviews 67 different estimates of the value of life published by economists in peer-reviewed academic journals. The Miller results, in most instances, show the value of life to range from approximately \$1.6 million to \$2.9 million dollars in year 1988 after-tax dollars, with a mean of approximately \$2.2 million dollars. In "The Value of Life: Estimates with Risks by Occupation and Industry," Economic Inquiry, Vol. 42, No. 1, May 2003, pp. 29-48, Professor W. K. Viscusi estimates the value of life to be approximately \$4.7 million dollars in year 2000 dollars. An early seminal paper on

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the value of life was written by Richard Thaler and Sherwin Rosen, "The Value of Saving a Life: Evidence from the Labor Market." in N.E. Terlickyj (ed.), Household Production and Consumption. New York: Columbia University Press, 1975, pp. 265-300. The Meta-Analyses Appendix to this report reviews additional literature suggesting a value of life of approximately \$5.4 million in year 2008 dollars.

Because it is generally accepted by economists, the economic methodology for the valuation of life has been found to meet the Daubert and Frye standards by many courts, along with the Rules of Evidence in many states nationwide. My testimony on the value of life has been accepted in approximately 225 state and federal cases nationwide in approximately two-thirds of the states and two-thirds of the federal jurisdictions. Testimony has been accepted by U.S. district and appellate courts as well as in state circuit, appellate, and supreme courts. Proof of general acceptance and other standards is found in a discussion of the extensive references to the scientific economic peer-reviewed literature on the value of life listed in the **Value of Life Appendix** to this report.

The underlying, academic, peer-reviewed studies fall into two general groups: (1) consumer behavior and purchases of safety devices; (2) wage risk premiums to workers; in addition, there is a third group of studies consisting of cost-benefit analyses of regulations. For example, one consumer safety study analyzes the costs of smoke detectors and the lifesaving reduction associated with them. One wage premium study examines the differential rates of pay for dangerous occupations with a risk of death on the job. Just as workers receive shift premiums for undesirable work hours, workers also receive a higher rate of pay to accept a increased risk of death on the job. A study of government regulation examines the lifesaving resulting from the installation of smoke stack scrubbers at high-sulphur, coal-burning power plants. As a hypothetical example of the methodology, assume that a safety device such as a carbon monoxide detector costs \$46 and results in lowering a person's risk of premature death by one chance in 100,000. The cost per life saved is obtained by dividing \$46 by the one in 100,000 probability, yielding \$4,600,000. Overall, based on the peer-reviewed economic literature, I estimate the central tendency of the range of the economic studies to be approximately \$4.9 million in year 2019 dollars.

Other factors may be weighed to determine if these estimated losses for Judith Larocque should be adjusted because of special qualities or circumstances that economists do not as yet have a methodology for analysis.

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In each set of tables, the estimated losses are calculated from September 11, 2001 through an assumed trial or resolution date of January 1, 2020, and from that date thereafter. The last table in each set accumulates the past and future estimated losses. These estimates are provided as a tool, an aid, and a guide to assist the evaluation by others.

All opinions expressed in this report are clearly labeled as such. They are rendered in accordance with generally accepted standards within the field of economics and are expressed to a reasonable degree of economic certainty. Estimates, assumptions, illustrations and the use of benchmarks, which are not opinions, but which can be viewed as hypothetical in nature, are also clearly disclosed and identified herein.

In my opinion, it is reasonable for experts in the field of economics and finance to rely on the materials and information I reviewed in this case for the formulation of my substantive opinions herein.

If additional information is provided to me, which could alter my opinions, I may incorporate any such information into an update, revision, addendum, or supplement of the opinions expressed in this report.

If you have any questions, please do not hesitate to call me.

Sincerely,



Stan V. Smith, Ph.D.
President



APPENDIX: HOUSEHOLD SERVICES VALUATION

Courts have long recognized claims for the value of tangible household family services as an element of damages in personal injury and wrongful death cases, as an aspect of the pecuniary loss in such cases. These services are those that are provided by the injured family member to himself or herself and to other family members, without charge or cost. Other family members who may receive such services can include spouses, children, parents or siblings; such family members do not necessarily have to reside in the same household to receive such services.

Economists and courts have also long recognized that an appropriate method in valuing such tangible services is to value their estimated market-based costs by examining costs paid in labor markets that provide generally comparable services for. Thus, economists can value the service by looking at market equivalents from which a pecuniary standard can be established. This approach is set forth in the 1913 U.S. Supreme Court Decision, Michigan Central Railroad Company v. Vreeland, 227 U.S. 59 (1913). So this method is a century old.

The Supreme Court's suggestion in valuing compensable services in the Vreeland decision is a standard that is not rigid, but actually rather general: "[The] pecuniary loss or damage must be one which can be measured by some standard.... Compensation for such loss manifestly does not include damages by way of recompense for grief or wounded feelings." Michigan Central v. Vreeland.

Examples of lost household services that used to be performed by persons (whether fatally or non-fatally injured) can include physical chores such as mowing the lawn, painting the house, cleaning the windows, doing the laundry, washing and repairing the car, preparing the meals and doing the dishes, among others. For many decades economists have met the Supreme Court's general standard by using labor market equivalents for cooks, laundry workers, gardeners, maids, etc. in valuing the physical chores regarding housekeeping services.

Additionally, economists have recognized that tangible services to family members include services well beyond the physical housekeeping chores. For example, William G. Jungbauer and Mark J. Odegard, in Maximizing Recovery in FELA Wrongful Death Actions, in Assessing Family Loss in Wrongful Death Litigation: The Special Roles of Lost Services and Personal Consumption, Lawyers & Judges Publishing Co., 1999, pp. 284, indicate that a complete analysis of all services performed by family members includes much, much more than the physical housekeeping chores. Frank D. Tinari, in a peer-reviewed, scientific, economic journal article "Household Services: Toward a More Comprehensive Measure," Journal of Forensic Economics, Vol. 11, No. 3, Fall

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1998, pp. 253-265, expresses the same view. Dr. Tinari has been a tenured Professor at Seton Hall University, and is a former president of the National Association of Forensic Economics. There has been no peer-reviewed critique of this article since it appeared.

Jungbauer and Odegard indicate that a person may have provided services of many other professions such as that of a chauffeur, driving other family members to appointments, or that of a security guard, especially regarding the injury to a male spouse, etc. Every family member acts as a companion to other family members. And it is common for family members to act as counselors for one another, typically providing advice and counsel on important personal, family, medical, financial, career or other issues. The marketplace can and does value such items of loss. If the person cannot provide these services, or does so at a reduced capacity or rate, there is a distinct and definite loss to the other family members. These losses have a definite and easily measurable pecuniary value. Vreeland requires only that a "reasonable expectation" of loss of services be proven and that such loss be valued by some standard, presumably a reasonably-based economic standard, to allow recovery.

The economic literature on recovery of loss of services discusses an estimated market-oriented valuation cost method to assess the pecuniary value of the loss of accompaniment services, as well as the value of advice, guidance and counsel services that family members provide to one another, within a broadly defined scope of family services. See, for example, Frank D. Tinari, "Household Services: Toward a More Comprehensive Measure," Journal of Forensic Economics, Vol. 11, No. 3, Fall 1998, pp. 253-265.

Finally, according to Chief Justice Robert Wilentz of the Supreme Court of New Jersey, in Green v. Bittner, 85 NJ 1, 1980, pp. 12, accompaniment services, to be compensable, must be that which would have provided services substantially equivalent to those provided by the companions often hired today by the aged or infirm, or substantially equivalent to services provided by nurses or practical nurses; and its value must be confined to what the marketplace would pay a stranger with similar qualifications for performing such services.

In valuing the household services that are provided by family members to one another, beyond the physical housekeeping chores, both the U.S Supreme Court and the New Jersey Supreme Court discuss looking at labor markets for the equivalent value of such services. This methodology is identical to the traditional approach that economists have been using for over four decades in valuing the physical chores involved in housekeeping services.

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APPENDIX: VALUE OF LIFE

The economic methodology for the valuation of life has been found to meet the Daubert and Frye standards by many courts, along with the Rules of Evidence in many states nationwide. My testimony on the value of life has been accepted in approximately 225 state and federal cases nationwide in approximately two-thirds of the states and two-thirds of the federal jurisdictions. Testimony has been accepted by U.S. district and appellate courts as well as in state circuit, appellate, and supreme courts. The Daubert standard sets forth four criteria:

1. Testing of the theory and science
2. Peer Review
3. Known or potential rate of error
4. Generally accepted.

Testing of the theory and science has been accomplished over the past four decades, since the 1960s. Dozens of economists of high renown have published over a hundred articles in high quality, peer-reviewed economic journals measuring the value of life. The value of life theories are perhaps among the most well-tested in the field of economics, as evidenced by the enormous body of economic scientific literature that has been published in the field and is discussed below.

Peer Review of the concepts and methodology have been extraordinarily extensive. One excellent review of this extensive, peer-reviewed literature can be found in "The Value of Risks to Life and Health," W. K. Viscusi, Journal of Economic Literature, Vol. 31, December 1993, pp. 1912-1946. A second is "The Value of a Statistical Life: A Critical Review of Market Estimates throughout the World." W. K. Viscusi and J. E. Aldy, Journal of Risk and Uncertainty, Vol. 27, No. 1, November 2002, pp. 5-76. Additional theoretical and empirical work by Viscusi, a leading researcher in the field, can be found in: "The Value of Life", W. K. Viscusi, John M. Olin Center for Law, Economics, and Business, Harvard Law School, Discussion Paper No. 517, June 2005. An additional peer-reviewed article discusses the application to forensic economics: "The Plausible Range for the Value of Life," T. R. Miller, Journal of Forensic Economics, Vol. 3, No. 3, Fall 1990, pp. 17-39, which discusses the many dozens of articles published in other peer-reviewed economic journals on this topic. This concept is discussed in detail in "Willingness to Pay Comes of Age: Will the System Survive?" T. R. Miller, Northwestern University Law Review, Summer 1989, pp. 876-907, and "Hedonic Damages in Personal Injury and Wrongful Death

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Litigation," by Stan V. Smith in Gaughan and Thornton, eds., Litigation Economics, Contemporary Studies in Economic and Financial Analysis, Vol. 74, pp. 39-59, JAI Press, Greenwich, CT, 1993. Kenneth Arrow, a Nobel Laureate in economics, discusses this method for valuing life in "Invaluable Goods," Journal of Economic Literature, Vol. 35, No. 2, 1997, pp. 759. See the Meta-Analyses Appendix for an additional review of the literature.

The known or potential rate of error is well researched. All of these articles discuss the known or potential rate of error, well within the acceptable standard in the field of economics, generally using a 95% confidence rate for the statistical testing and acceptance of results. There are few areas in the field of economics where the known or potential rate of error has been as well-accepted and subject to more extensive investigation.

General Acceptance of the concepts and methodology on the value of life in the field of economics is extensive. This methodology is and has been generally accepted in the field of economics for many years. Indeed, according to the prestigious and highly-regarded research institute, The Rand Corporation, by 1988, the peer-reviewed scientific methods for estimating the value of life were well-accepted: "Most economists would agree that the willingness-to-pay methodology is the most conceptually appropriate criterion for establishing the value of life," Computing Economic loss in Cases of Wrongful Death, King and Smith, Rand Institute for Civil Justice, R-3549-ICJ, 1988.

While first discussed in cutting edge, peer-reviewed economic journals, additional proof of general acceptance is now indicated by the fact that this methodology is now taught in standard economics courses at the undergraduate and graduate level throughout hundreds of colleges and universities nationwide as well as the fact that it is taught and discussed in widely-accepted textbooks in the field of law and economics: Economics, Sixth Edition, David C. Colander, McGraw-Hill Irwin, Boston, 2006, pp. 463-465; this introductory economics textbook is the third most widely used textbook in college courses nationwide. Hamermesh and Rees's The Economics of Work and Pay, Harper-Collins, 1993, Chapter 13, a standard advanced textbook in labor economics, also discusses the methodology for valuing life. Other textbooks discuss this topic as well. Richard Posner, a Judge and former Chief Judge of the U.S. Court of Appeals for the highly regarded 7th Circuit and Senior Lecturer at the University of Chicago Law School, one of most prolific legal writers in America, details the Value of Life approach in his widely used textbooks: Economic Analysis of Law, 1986, Little Brown & Co., pp. 182-185 and Tort Law, 1982, Little Brown & Co., pp. 120-126.

As further evidence of general acceptance in the field, some surveys (albeit non-scientific) published in the field of

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forensic economics show that hundreds of economists nationwide are now familiar with this methodology and are available to prepare (and critique) forensic economic value of life estimates. Indeed, some economists who indicate they will prepare such analysis for plaintiffs also are willing to critique such analysis for defendants, as I have done. That an economist is willing to critique a report does not indicate that he or she is opposed to the concept or the methodology, but merely available to assure that the plaintiff economist has employed proper techniques. The fact that there are economists who indicate they do not prepare estimates of value of life is again no indication that they oppose the methodology: many claim they are not familiar with the literature and untrained in this area. While some CPAs and others without a degree in economics have opposed these methods, such professionals do not have the requisite academic training and are unqualified to make such judgements. However, as in any field of economics, this area is not without any dissent. General acceptance does not mean universal acceptance.

Additional evidence of general acceptance in the field is found in the teaching of the concepts regarding the value of life. Forensic Economics is now taught as a special field in a number of institutions nationwide. I taught what is believed to be the first course ever presented in the field of Forensic Economics at DePaul University in Spring, 1990. My own book, Economic/Hedonic Damages, Anderson, 1990, and supplemental updates thereto, co-authored with Dr. Michael Brookshire, a Professor of Economics in West Virginia, has been used as a textbook in at least 5 colleges and universities nationwide in such courses in economics, and has a thorough discussion of the methodology. Toppino et. al., in "Forensic Economics in the Classroom," published in The Earnings Analyst, Journal of the American Rehabilitation Economics Association, Vol. 4, 2001, pp. 53-86, indicate that hedonic damages is one of 15 major topic areas taught in such courses.

Lastly, general acceptance is found by examining publications in the primary journal in the field of Forensic Economics, which is the peer-reviewed Journal of Forensic Economics, where there have been published many articles on the value of life. Some are cited above. Others include: "The Econometric Basis for Estimates of the Value of Life," W. K. Viscusi, Vol 3, No. 3, Fall 1990, pp. 61-70; "Hedonic Damages in the Courtroom Setting," Stan V. Smith, Vol. 3, No. 3, Fall 1990, pp. 41-49; "Issues Affecting the Calculated Value of Life," E. P. Berla, M. L. Brookshire and Stan V. Smith, Vol 3, No. 1, 1990, pp. 1-8; "Hedonic Damages and Personal Injury: A Conceptual Approach." G. R. Albrecht, Vol. 5., No. 2, Spring/Summer 1992, pp. 97-104; "The Application of the Hedonic Damages Concept to Wrongful and Personal Injury Litigation." G. R. Albrecht, Vol. 7, No. 2, Spring/Summer 1994, pp. 143-150; and also "A Review of the Monte Carlo Evidence Concerning Hedonic Value of Life Estimates," R. F.



Gilbert, Vol. 8, No. 2, Spring/Summer 1995, pp. 125-130. Professor Ike Mathur, while Chairman of the Department of Finance at Southern Illinois University wrote an article on how the value of life studies can be used to provide a basis for estimating the value of life per year in application to litigation. This article corroborates my approach: "Estimating Value of Life per Life Year." I. Mathur, Journal of Forensic Economics, Vol. 3, No. 3, 1990, pp. 95-96. As do many of the authors of applications of the value of life literature to litigation economics, Professor Mathur has frequently testified in court, and courts have admitted his testimony.

It is important to note that this methodology is endorsed and employed by the U. S. Government as the standard and recommended approach for use by all U. S. Agencies in valuing life for policy purposes, as mandated in current and past Presidential Executive Orders in effect since 1972, and as discussed in "Report to Congress on the Costs and Benefits of Federal Regulations," Office of Management and Budget, 1998, and "Economic Analysis of Federal Regulations Under Executive Order 12866," Executive Office of the President, Office of Management and Budget, pp. 1-37, and "Report to the President on Executive Order No. 12866," Regulatory Planning and Review, May 1, 1994, Office of Information and Regulatory Affairs, Office of Management and Budget. Prior presidents signed similar orders as discussed in "Federal Agency Valuations of Human life," Administrative Conference of the United States, Report for Recommendation 88-7, December 1988, pp. 368-408. 926

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APPENDIX: META-ANALYSES AND VALUE OF LIFE RESULTS SINCE 2000

Below I list the principal systematic reviews (meta-analyses), since the year 2000, of the value of life literature, and the values of a statistical life that they recommend. In statistics, a meta-analysis combines the results of several studies that address a set of related research hypotheses. Meta-analysis increase the statistical power of studies by analyzing a group of studies and provide a more powerful and accurate data analysis than would result from analyzing each study alone. Based on those reviews, the Summary Table suggests a best estimate. The following table summarizes the studies and their findings.

These statistically based studies place the value between \$4.4 and \$7.5 million, with \$5.9 million in year 2005 dollars representing a conservative yet credible estimate of the average (and range midpoint) of the values of a statistical life published in the studies in year 2005 dollars. Net of human capital, a credible net value of life based on all these literature reviews to be \$4.8 million in year 2005 dollars, or \$5.4 million in year 2008 dollars.

The actual value that I use, \$4.1 million in year 2008 dollars (\$4.9 million in year 2019 dollars) is approximately 24 percent lower than a conservative average estimate based on the credible meta-analyses. This value was originally based on a review conducted in the late 1980s, averaging the results published by that time. I have increased that late 1980s value only by inflation over time, despite the fact a review of literature over the years since that time has put obvious upward pressure on the figure that I use.



VALUE OF STATISTICAL LIFE SUMMARY TABLE

Mean and range of value of statistical life estimates (in 2005 dollars) from the best meta-analyses and systematic reviews since 2000 and characteristics of those reviews.

Study	Formal Meta-Analysis?	Number of Values	Best Estimate (2005 Dollars)	Range	Context
Miller 2000	Yes	68 estimates	\$5.1M	\$4.5- \$6.2M	US estimate from all
Mrozek & Taylor 2002	Yes	203 estimates	\$4.4M	+ or - 35%	Labor market
Viscusi & Aldy 2003	Yes	49 estimates	\$6.5M	\$5.1- \$9.6M	Labor market, US estimate from all
Kochi et al. 2006	Yes	234 estimates	\$6.0M	+ or - 44%	Labor market survey
Bellavance 2006 (published in 2009)	Yes	37 estimates	\$7.5M	+ or - 19%	Labor market

Adapted from Ted R. Miller's paper "Hedonic Damages," Journal of Forensic Economics, Vol. 20, No. 2 (October 2008), pp. 137-153.



Miller (2000) started from the Miller 1989 JFE estimates and used statistical methods to adjust for differences between studies. It also added newer studies, primarily ones outside the United States. The authors specified the most appropriate study approach *a priori*, which allowed calculation of a best estimate from the statistical regression. Miller, Ted R, "Variations between Countries in Values of Statistical Life", Journal of Transport Economics and Policy, Vol. 34, No. 2 (May 2000), pp. 169-188.

Mrozek and Taylor (2002) searched intensively for studies of the value of life implied by wages paid for risky jobs. They coded all values from each study rather than a most appropriate estimate. A statistical analysis identified what factors accounted for the differences in values between studies. The authors specified the most appropriate study approach *a priori*, which allowed calculation of a best estimate from the statistical regression. Mrozek, Janusz R. and Laura O. Taylor, "What Determines the Value of Life? A Meta-Analysis", Journal of Policy Analysis and Management, Vol. 21, No. 2 (2002), pp. 253-270.

Viscusi and Aldy (2003) focused on values from labor market studies that they considered of high quality and that provided data on risk levels and other important explanatory variables. They used statistical methods to account for variations between studies and derive a best estimate. W.K. Viscusi and J.E. Aldy, "The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World", Journal of Risk and Uncertainty, Vol. 27, No. 1 (2003), pp. 5-76.

Kochi et al. (2006) searched intensively for studies of the value of life implied by wages and coded all values from each study rather than a most appropriate estimate. They did not filter study quality carefully. The best estimate was derived by statistical methods based on the distribution of the values within and across studies. Kochi, Ikuho, Bryan Hubbell, and Randall Kramer, "An Empirical Bayes Approach to Combining and Comparing Estimates of the Value of a Statistical Life for Environmental Policy Analysis", Environmental and Resource Economics, Vol. 34 (2006), pp. 385-406.

Bellavance et al. (2009) focused on values from labor market studies that they considered of high quality and that provided data on risk levels and other important explanatory variables. They used statistical methods to account for variations between studies and derive a best estimate. Bellavance, Francois, Georges Dionne, and Martin Lebeau, "The Value of a Statistical Life: A Meta-Analysis with a Mixed Effects Regression Model," Journal of Health Economics, Vol. 28, Issue 2, (2009), pp. 444-464. 3A22

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SUMMARY OF LOSSES FOR JUDITH LAROCQUE

TABLE

	DESCRIPTION	ESTIMATE
	*****	*****
<u>EARNINGS</u>		
	LOSS OF WAGES & BENEFITS, NET OF PERSONAL CONSUMPTION	
9	Scenario 1 to age 67	\$2,058,591
18	Scenario 2 to age 67	\$3,969,960
 <u>HOUSEHOLD/FAMILY SERVICES</u>		
21	LOSS OF HOUSEHOLD/FAMILY HOUSEKEEPING AND HOME MANAGEMENT SERVICES	\$ 711,643
 <u>LOSS OF ENJOYMENT OF LIFE</u>		
24	LOSS OF VALUE OF LIFE	\$4,125,268

The information on this Summary of Losses is intended to summarize losses under certain given assumptions. Please refer to the report and the tables for all the opinions.

LOSS OF PAST WAGES - SCENARIO 1
2001 - 2019

YEAR	AGE	WAGES	CUMULATE
*****	***	*****	*****
2001	51	\$38,940	\$38,940
2002	52	130,671	169,611
2003	53	137,554	307,165
2004	54	143,622	450,787
2005	55	147,988	598,775
2006	56	153,747	752,522
2007	57	160,023	912,545
2008	58	164,731	1,077,276
2009	59	166,463	1,243,739
2010	60	168,504	1,412,243
2011	61	169,373	1,581,616
2012	62	179,312	1,760,928
2013	63	179,312	1,940,240
2014	64	183,915	2,124,155
2015	65	188,445	2,312,600
2016	66	192,469	2,505,069
2017	67	198,269	2,703,338
2018	68	204,066	2,907,404
2019	69	210,188	\$3,117,592

LAROCQUE \$3,117,592

LOSS OF PAST EMPLOYEE BENEFITS - SCENARIO 1
2001 - 2019

YEAR	AGE	BENEFITS	EMPLOYEE CUMULATE
*****	***	*****	*****
2001	51	\$6,783	\$6,783
2002	52	22,763	29,546
2003	53	23,962	53,508
2004	54	25,019	78,527
2005	55	25,780	104,307
2006	56	26,783	131,090
2007	57	27,876	158,966
2008	58	28,696	187,662
2009	59	28,998	216,660
2010	60	29,353	246,013
2011	61	29,505	275,518
2012	62	31,236	306,754
2013	63	31,236	337,990
2014	64	32,038	370,028
2015	65	32,827	402,855
2016	66	33,528	436,383
2017	67	34,538	470,921
2018	68	35,548	506,469
2019	69	36,615	\$543,084

LAROCQUE \$543,084

LOSS OF PAST PERSONAL CONSUMPTION - SCENARIO 1
2001 - 2019

YEAR	AGE	CONSUMPTION	CUMULATE
****	***	*****	*****
2001	51	-\$16,071	-\$16,071
2002	52	-53,928	-69,999
2003	53	-56,769	-126,768
2004	54	-59,273	-186,041
2005	55	-61,075	-247,116
2006	56	-63,451	-310,567
2007	57	-66,041	-376,608
2008	58	-67,984	-444,592
2009	59	-68,699	-513,291
2010	60	-69,542	-582,833
2011	61	-69,900	-652,733
2012	62	-74,002	-726,735
2013	63	-74,002	-800,737
2014	64	-75,902	-876,639
2015	65	-77,771	-954,410
2016	66	-79,432	-1,033,842
2017	67	-81,826	-1,115,668
2018	68	-84,218	-1,199,886
2019	69	-86,745	-\$1,286,631
LAROCQUE			-\$1,286,631

ECONOMIC LOSS TO DATE - SCENARIO 1
2001 - 2019

YEAR	AGE	WAGES	EMPLOYEE BENEFITS	PERSONAL CONSUMPTION	TOTAL	CUMULATE
*****	***	*****	*****	*****	*****	*****
2001	51	\$38,940	\$6,783	-\$16,071	\$29,652	\$29,652
2002	52	130,671	22,763	-53,928	99,506	129,158
2003	53	137,554	23,962	-56,769	104,747	233,905
2004	54	143,622	25,019	-59,273	109,368	343,273
2005	55	147,988	25,780	-61,075	112,693	455,966
2006	56	153,747	26,783	-63,451	117,079	573,045
2007	57	160,023	27,876	-66,041	121,858	694,903
2008	58	164,731	28,696	-67,984	125,443	820,346
2009	59	166,463	28,998	-68,699	126,762	947,108
2010	60	168,504	29,353	-69,542	128,315	1,075,423
2011	61	169,373	29,505	-69,900	128,978	1,204,401
2012	62	179,312	31,236	-74,002	136,546	1,340,947
2013	63	179,312	31,236	-74,002	136,546	1,477,493
2014	64	183,915	32,038	-75,902	140,051	1,617,544
2015	65	188,445	32,827	-77,771	143,501	1,761,045
2016	66	192,469	33,528	-79,432	146,565	1,907,610
2017	67	198,269	34,538	-81,826	150,981	2,058,591
2018	68	204,066	35,548	-84,218	155,396	2,213,987
2019	69	210,188	36,615	-86,745	160,058	\$2,374,045
LAROCQUE		\$3,117,592	\$543,084	-\$1,286,631	\$2,374,045	

PRESENT VALUE OF FUTURE WAGES - SCENARIO 1
2020 - 2034

YEAR	AGE	WAGES	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
*****	***	*****	*****	*****	*****
2020	70	\$216,494	0.98765	\$213,820	\$213,820
2021	71	218,659	0.97546	213,293	427,113
2022	72	220,846	0.96342	212,767	639,880
2023	73	223,054	0.95152	212,240	852,120
2024	74	225,285	0.93978	211,718	1,063,838
2025	75	227,538	0.92817	211,194	1,275,032
2026	76	229,813	0.91672	210,674	1,485,706
2027	77	232,111	0.90540	210,153	1,695,859
2028	78	234,432	0.89422	209,634	1,905,493
2029	79	236,776	0.88318	209,116	2,114,609
2030	80	239,144	0.87228	208,601	2,323,210
2031	81	241,535	0.86151	208,085	2,531,295
2032	82	243,950	0.85087	207,570	2,738,865
2033	83	246,390	0.84037	207,059	2,945,924
2034	84	54,543	0.83807	45,711	\$2,991,635

JUDITH LAROCQUE \$2,991,635

PRESENT VALUE OF FUTURE EMPLOYEE BENEFITS - SCENARIO 1
2020 - 2034

YEAR	AGE	EMPLOYEE BENEFITS	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
*****	***	*****	*****	*****	*****
2020	70	\$37,713	0.98765	\$37,247	\$37,247
2021	71	38,090	0.97546	37,155	74,402
2022	72	38,471	0.96342	37,064	111,466
2023	73	38,856	0.95152	36,972	148,438
2024	74	39,245	0.93978	36,882	185,320
2025	75	39,637	0.92817	36,790	222,110
2026	76	40,033	0.91672	36,699	258,809
2027	77	40,434	0.90540	36,609	295,418
2028	78	40,838	0.89422	36,518	331,936
2029	79	41,246	0.88318	36,428	368,364
2030	80	41,659	0.87228	36,338	404,702
2031	81	42,075	0.86151	36,248	440,950
2032	82	42,496	0.85087	36,159	477,109
2033	83	42,921	0.84037	36,070	513,179
2034	84	9,501	0.83807	7,963	\$521,142

JUDITH LAROCQUE \$521,142

PRESENT VALUE OF FUTURE PERSONAL CONSUMPTION - SCENARIO 1
2020 - 2034

YEAR	AGE	PERSONAL CONSUMPTION	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
*****	***	*****	*****	*****	*****
2020	70	-\$89,347	0.98765	-\$88,244	-\$88,244
2021	71	-90,241	0.97546	-88,026	-176,270
2022	72	-91,143	0.96342	-87,809	-264,079
2023	73	-92,054	0.95152	-87,591	-351,670
2024	74	-92,975	0.93978	-87,376	-439,046
2025	75	-93,905	0.92817	-87,160	-526,206
2026	76	-94,844	0.91672	-86,945	-613,151
2027	77	-95,792	0.90540	-86,730	-699,881
2028	78	-96,750	0.89422	-86,516	-786,397
2029	79	-97,717	0.88318	-86,302	-872,699
2030	80	-98,695	0.87228	-86,090	-958,789
2031	81	-99,681	0.86151	-85,876	-1,044,665
2032	82	-100,678	0.85087	-85,664	-1,130,329
2033	83	-101,685	0.84037	-85,453	-1,215,782
2034	84	-22,510	0.83807	-18,865	-\$1,234,647

JUDITH LAROCQUE

-\$1,234,647

PRESENT VALUE OF FUTURE WAGE AND BENEFIT LOSS - SCENARIO 1
2020 - 2034

YEAR	AGE	WAGES	EMPLOYEE		TOTAL	CUMULATE
			BENEFITS	CONSUMPTION		
*****	***	*****	*****	*****	*****	*****
2020	70	\$213,820	\$37,247	-\$88,244	\$162,823	\$162,823
2021	71	213,293	37,155	-88,026	162,422	325,245
2022	72	212,767	37,064	-87,809	162,022	487,267
2023	73	212,240	36,972	-87,591	161,621	648,888
2024	74	211,718	36,882	-87,376	161,224	810,112
2025	75	211,194	36,790	-87,160	160,824	970,936
2026	76	210,674	36,699	-86,945	160,428	1,131,364
2027	77	210,153	36,609	-86,730	160,032	1,291,396
2028	78	209,634	36,518	-86,516	159,636	1,451,032
2029	79	209,116	36,428	-86,302	159,242	1,610,274
2030	80	208,601	36,338	-86,090	158,849	1,769,123
2031	81	208,085	36,248	-85,876	158,457	1,927,580
2032	82	207,570	36,159	-85,664	158,065	2,085,645
2033	83	207,059	36,070	-85,453	157,676	2,243,321
2034	84	45,711	7,963	-18,865	34,809	\$2,278,130
LAROCQUE		\$2,991,635	\$521,142	-\$1,234,647	\$2,278,130	

PRESENT VALUE OF NET WAGE AND BENEFIT LOSS - SCENARIO 1
2001 - 2034

YEAR	AGE	WAGES	EMPLOYEE BENEFITS	PERSONAL CONSUMPTION	TOTAL	CUMULATE
****	***	*****	*****	*****	*****	*****
2001	51	\$38,940	\$6,783	-\$16,071	\$29,652	\$29,652
2002	52	130,671	22,763	-53,928	99,506	129,158
2003	53	137,554	23,962	-56,769	104,747	233,905
2004	54	143,622	25,019	-59,273	109,368	343,273
2005	55	147,988	25,780	-61,075	112,693	455,966
2006	56	153,747	26,783	-63,451	117,079	573,045
2007	57	160,023	27,876	-66,041	121,858	694,903
2008	58	164,731	28,696	-67,984	125,443	820,346
2009	59	166,463	28,998	-68,699	126,762	947,108
2010	60	168,504	29,353	-69,542	128,315	1,075,423
2011	61	169,373	29,505	-69,900	128,978	1,204,401
2012	62	179,312	31,236	-74,002	136,546	1,340,947
2013	63	179,312	31,236	-74,002	136,546	1,477,493
2014	64	183,915	32,038	-75,902	140,051	1,617,544
2015	65	188,445	32,827	-77,771	143,501	1,761,045
2016	66	192,469	33,528	-79,432	146,565	1,907,610
2017	67	198,269	34,538	-81,826	150,981	2,058,591
2018	68	204,066	35,548	-84,218	155,396	2,213,987
2019	69	210,188	36,615	-86,745	160,058	2,374,045
2020	70	213,820	37,247	-88,244	162,823	2,536,868
2021	71	213,293	37,155	-88,026	162,422	2,699,290
2022	72	212,767	37,064	-87,809	162,022	2,861,312
2023	73	212,240	36,972	-87,591	161,621	3,022,933
2024	74	211,718	36,882	-87,376	161,224	3,184,157
2025	75	211,194	36,790	-87,160	160,824	3,344,981
2026	76	210,674	36,699	-86,945	160,428	3,505,409
2027	77	210,153	36,609	-86,730	160,032	3,665,441
2028	78	209,634	36,518	-86,516	159,636	3,825,077
2029	79	209,116	36,428	-86,302	159,242	3,984,319
2030	80	208,601	36,338	-86,090	158,849	4,143,168
2031	81	208,085	36,248	-85,876	158,457	4,301,625
2032	82	207,570	36,159	-85,664	158,065	4,459,690
2033	83	207,059	36,070	-85,453	157,676	4,617,366
2034	84	45,711	7,963	-18,865	34,809	\$4,652,175
LAROCQUE		\$6,109,227	\$1,064,226	-\$2,521,278	\$4,652,175	

LOSS OF PAST WAGES - SCENARIO 2
2001 - 2019

YEAR	AGE	WAGES	CUMULATE
*****	***	*****	*****
2001	51	\$44,797	\$44,797
2002	52	175,973	220,770
2003	53	210,218	430,988
2004	54	251,128	682,116
2005	55	300,000	982,116
2006	56	311,674	1,293,790
2007	57	324,398	1,618,188
2008	58	333,942	1,952,130
2009	59	337,452	2,289,582
2010	60	341,591	2,631,173
2011	61	343,351	2,974,524
2012	62	363,499	3,338,023
2013	63	363,499	3,701,522
2014	64	372,830	4,074,352
2015	65	382,015	4,456,367
2016	66	390,172	4,846,539
2017	67	401,929	5,248,468
2018	68	413,681	5,662,149
2019	69	426,091	\$6,088,240

LAROCQUE \$6,088,240

LOSS OF PAST EMPLOYEE BENEFITS - SCENARIO 2
2001 - 2019

YEAR	AGE	BENEFITS	EMPLOYEE CUMULATE
*****	***	*****	*****
2001	51	\$7,306	\$7,306
2002	52	26,977	34,283
2003	53	30,461	64,744
2004	54	34,455	99,199
2005	55	39,120	138,319
2006	56	40,642	178,961
2007	57	42,301	221,262
2008	58	43,546	264,808
2009	59	44,004	308,812
2010	60	44,543	353,355
2011	61	44,773	398,128
2012	62	47,400	445,528
2013	63	47,400	492,928
2014	64	48,617	541,545
2015	65	49,815	591,360
2016	66	50,878	642,238
2017	67	52,412	694,650
2018	68	53,944	748,594
2019	69	55,562	\$804,156
		LAROCQUE	\$804,156

LOSS OF PAST PERSONAL CONSUMPTION - SCENARIO 2
2001 - 2019

YEAR	AGE	CONSUMPTION	CUMULATE
*****	***	*****	*****
2001	51	-\$17,296	-\$17,296
2002	52	-67,380	-84,676
2003	53	-79,904	-164,580
2004	54	-94,826	-259,406
2005	55	-112,590	-371,996
2006	56	-116,971	-488,967
2007	57	-121,747	-610,714
2008	58	-125,328	-736,042
2009	59	-126,646	-862,688
2010	60	-128,199	-990,887
2011	61	-128,860	-1,119,747
2012	62	-136,421	-1,256,168
2013	63	-136,421	-1,392,589
2014	64	-139,923	-1,532,512
2015	65	-143,370	-1,675,882
2016	66	-146,432	-1,822,314
2017	67	-150,844	-1,973,158
2018	68	-155,254	-2,128,412
2019	69	-159,912	-\$2,288,324
LAROCQUE			

LAROCQUE -\$2,288,324

ECONOMIC LOSS TO DATE - SCENARIO 2
2001 - 2019

YEAR	AGE	WAGES	EMPLOYEE		TOTAL	CUMULATE
			BENEFITS	CONSUMPTION		
2001	51	\$44,797	\$7,306	-\$17,296	\$34,807	\$34,807
2002	52	175,973	26,977	-67,380	135,570	170,377
2003	53	210,218	30,461	-79,904	160,775	331,152
2004	54	251,128	34,455	-94,826	190,757	521,909
2005	55	300,000	39,120	-112,590	226,530	748,439
2006	56	311,674	40,642	-116,971	235,345	983,784
2007	57	324,398	42,301	-121,747	244,952	1,228,736
2008	58	333,942	43,546	-125,328	252,160	1,480,896
2009	59	337,452	44,004	-126,646	254,810	1,735,706
2010	60	341,591	44,543	-128,199	257,935	1,993,641
2011	61	343,351	44,773	-128,860	259,264	2,252,905
2012	62	363,499	47,400	-136,421	274,478	2,527,383
2013	63	363,499	47,400	-136,421	274,478	2,801,861
2014	64	372,830	48,617	-139,923	281,524	3,083,385
2015	65	382,015	49,815	-143,370	288,460	3,371,845
2016	66	390,172	50,878	-146,432	294,618	3,666,463
2017	67	401,929	52,412	-150,844	303,497	3,969,960
2018	68	413,681	53,944	-155,254	312,371	4,282,331
2019	69	426,091	55,562	-159,912	321,741	\$4,604,072
LAROCQUE		\$6,088,240	\$804,156	-\$2,288,324	\$4,604,072	

PRESENT VALUE OF FUTURE WAGES - SCENARIO 2
2020 - 2034

YEAR	AGE	WAGES	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
*****	***	*****	*****	*****	*****
2020	70	\$438,874	0.98765	\$433,454	\$433,454
2021	71	443,263	0.97546	432,385	865,839
2022	72	447,696	0.96342	431,319	1,297,158
2023	73	452,173	0.95152	430,252	1,727,410
2024	74	456,695	0.93978	429,193	2,156,603
2025	75	461,262	0.92817	428,130	2,584,733
2026	76	465,875	0.91672	427,077	3,011,810
2027	77	470,534	0.90540	426,021	3,437,831
2028	78	475,239	0.89422	424,968	3,862,799
2029	79	479,991	0.88318	423,918	4,286,717
2030	80	484,791	0.87228	422,873	4,709,590
2031	81	489,639	0.86151	421,829	5,131,419
2032	82	494,535	0.85087	420,785	5,552,204
2033	83	499,480	0.84037	419,748	5,971,952
2034	84	110,570	0.83807	92,665	\$6,064,617

JUDITH LAROCQUE \$6,064,617

PRESENT VALUE OF FUTURE EMPLOYEE BENEFITS - SCENARIO 2
2020 - 2034

YEAR	AGE	EMPLOYEE BENEFITS	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
*****	***	*****	*****	*****	*****
2020	70	\$57,229	0.98765	\$56,522	\$56,522
2021	71	57,801	0.97546	56,383	112,905
2022	72	58,380	0.96342	56,244	169,149
2023	73	58,963	0.95152	56,104	225,253
2024	74	59,553	0.93978	55,967	281,220
2025	75	60,149	0.92817	55,828	337,048
2026	76	60,750	0.91672	55,691	392,739
2027	77	61,358	0.90540	55,554	448,293
2028	78	61,971	0.89422	55,416	503,709
2029	79	62,591	0.88318	55,279	558,988
2030	80	63,217	0.87228	55,143	614,131
2031	81	63,849	0.86151	55,007	669,138
2032	82	64,487	0.85087	54,870	724,008
2033	83	65,132	0.84037	54,735	778,743
2034	84	14,418	0.83807	12,083	\$790,826

JUDITH LAROCQUE \$790,826

PRESENT VALUE OF FUTURE PERSONAL CONSUMPTION - SCENARIO 2
2020 - 2034

YEAR	AGE	PERSONAL CONSUMPTION	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
*****	***	*****	*****	*****	*****
2020	70	-\$164,709	0.98765	-\$162,675	-\$162,675
2021	71	-166,357	0.97546	-162,275	-324,950
2022	72	-168,020	0.96342	-161,874	-486,824
2023	73	-169,701	0.95152	-161,474	-648,298
2024	74	-171,398	0.93978	-161,076	-809,374
2025	75	-173,112	0.92817	-160,677	-970,051
2026	76	-174,843	0.91672	-160,282	-1,130,333
2027	77	-176,591	0.90540	-159,885	-1,290,218
2028	78	-178,357	0.89422	-159,490	-1,449,708
2029	79	-180,141	0.88318	-159,097	-1,608,805
2030	80	-181,942	0.87228	-158,704	-1,767,509
2031	81	-183,762	0.86151	-158,313	-1,925,822
2032	82	-185,599	0.85087	-157,921	-2,083,743
2033	83	-187,455	0.84037	-157,532	-2,241,275
2034	84	-41,497	0.83807	-34,777	-\$2,276,052

JUDITH LAROCQUE

-\$2,276,052

PRESENT VALUE OF FUTURE WAGE AND BENEFIT LOSS - SCENARIO 2
2020 - 2034

YEAR	AGE	WAGES	EMPLOYEE		PERSONAL		CUMULATE
			BENEFITS	CONSUMPTION	TOTAL		
2020	70	\$433,454	\$56,522	-\$162,675	\$327,301	\$327,301	
2021	71	432,385	56,383	-162,275	326,493	653,794	
2022	72	431,319	56,244	-161,874	325,689	979,483	
2023	73	430,252	56,104	-161,474	324,882	1,304,365	
2024	74	429,193	55,967	-161,076	324,084	1,628,449	
2025	75	428,130	55,828	-160,677	323,281	1,951,730	
2026	76	427,077	55,691	-160,282	322,486	2,274,216	
2027	77	426,021	55,554	-159,885	321,690	2,595,906	
2028	78	424,968	55,416	-159,490	320,894	2,916,800	
2029	79	423,918	55,279	-159,097	320,100	3,236,900	
2030	80	422,873	55,143	-158,704	319,312	3,556,212	
2031	81	421,829	55,007	-158,313	318,523	3,874,735	
2032	82	420,785	54,870	-157,921	317,734	4,192,469	
2033	83	419,748	54,735	-157,532	316,951	4,509,420	
2034	84	418,711	54,603	-157,143	316,164	4,826,584	
LAROCQUE		\$6,064,617	\$790,826	-\$2,276,052	\$4,579,391		

PRESENT VALUE OF NET WAGE AND BENEFIT LOSS - SCENARIO 2
2001 - 2034

YEAR	AGE	WAGES	EMPLOYEE	PERSONAL	TOTAL	CUMULATE
*****	***	*****	*****	*****	*****	*****
2001	51	\$44,797	\$7,306	-\$17,296	\$34,807	\$34,807
2002	52	175,973	26,977	-67,380	135,570	170,377
2003	53	210,218	30,461	-79,904	160,775	331,152
2004	54	251,128	34,455	-94,826	190,757	521,909
2005	55	300,000	39,120	-112,590	226,530	748,439
2006	56	311,674	40,642	-116,971	235,345	983,784
2007	57	324,398	42,301	-121,747	244,952	1,228,736
2008	58	333,942	43,546	-125,328	252,160	1,480,896
2009	59	337,452	44,004	-126,646	254,810	1,735,706
2010	60	341,591	44,543	-128,199	257,935	1,993,641
2011	61	343,351	44,773	-128,860	259,264	2,252,905
2012	62	363,499	47,400	-136,421	274,478	2,527,383
2013	63	363,499	47,400	-136,421	274,478	2,801,861
2014	64	372,830	48,617	-139,923	281,524	3,083,385
2015	65	382,015	49,815	-143,370	288,460	3,371,845
2016	66	390,172	50,878	-146,432	294,618	3,666,463
2017	67	401,929	52,412	-150,844	303,497	3,969,960
2018	68	413,681	53,944	-155,254	312,371	4,282,331
2019	69	426,091	55,562	-159,912	321,741	4,604,072
2020	70	433,454	56,522	-162,675	327,301	4,931,373
2021	71	432,385	56,383	-162,275	326,493	5,257,866
2022	72	431,319	56,244	-161,874	325,689	5,583,555
2023	73	430,252	56,104	-161,474	324,882	5,908,437
2024	74	429,193	55,967	-161,076	324,084	6,232,521
2025	75	428,130	55,828	-160,677	323,281	6,555,802
2026	76	427,077	55,691	-160,282	322,486	6,878,288
2027	77	426,021	55,554	-159,885	321,690	7,199,978
2028	78	424,968	55,416	-159,490	320,894	7,520,872
2029	79	423,918	55,279	-159,097	320,100	7,840,972
2030	80	422,873	55,143	-158,704	319,312	8,160,284
2031	81	421,829	55,007	-158,313	318,523	8,478,807
2032	82	420,785	54,870	-157,921	317,734	8,796,541
2033	83	419,748	54,735	-157,532	316,951	9,113,492
2034	84	418,711	12,083	-34,777	69,971	\$9,183,463
LAROCQUE		\$12,152,857	\$1,594,982	-\$4,564,376	\$9,183,463	

LOSS OF PAST HOUSEHOLD SERVICES
2001 - 2019

YEAR	AGE	HOUSEHOLD	
		SERVICES	CUMULATE
*****	***	*****	*****
2001	51	\$3,581	\$3,581
2002	52	12,015	15,596
2003	53	12,648	28,244
2004	54	13,206	41,450
2005	55	13,608	55,058
2006	56	14,137	69,195
2007	57	14,714	83,909
2008	58	15,147	99,056
2009	59	15,306	114,362
2010	60	15,494	129,856
2011	61	15,574	145,430
2012	62	16,488	161,918
2013	63	16,488	178,406
2014	64	16,911	195,317
2015	65	17,328	212,645
2016	66	17,698	230,343
2017	67	18,231	248,574
2018	68	27,746	276,320
2019	69	28,579	\$304,899

LAROCQUE \$304,899

PRESENT VALUE OF FUTURE HOUSEHOLD SERVICES
2020 - 2034

YEAR	AGE	HOUSEHOLD SERVICES	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	70	\$29,436	0.98765	\$29,072	\$29,072
2021	71	29,730	0.97546	29,000	58,072
2022	72	30,027	0.96342	28,929	87,001
2023	73	30,327	0.95152	28,857	115,858
2024	74	30,630	0.93978	28,785	144,643
2025	75	30,936	0.92817	28,714	173,357
2026	76	31,245	0.91672	28,643	202,000
2027	77	31,557	0.90540	28,572	230,572
2028	78	31,873	0.89422	28,501	259,073
2029	79	32,192	0.88318	28,431	287,504
2030	80	32,514	0.87228	28,361	315,865
2031	81	32,839	0.86151	28,291	344,156
2032	82	33,167	0.85087	28,221	372,377
2033	83	33,499	0.84037	28,152	400,529
2034	84	7,416	0.83807	6,215	\$406,744

JUDITH LAROCQUE \$406,744

PRESENT VALUE OF NET HOUSEHOLD SERVICE LOSS
2001 - 2034

YEAR	AGE	SERVICES	HOUSEHOLD CUMULATE
*****	***	*****	*****
2001	51	\$3,581	\$3,581
2002	52	12,015	15,596
2003	53	12,648	28,244
2004	54	13,206	41,450
2005	55	13,608	55,058
2006	56	14,137	69,195
2007	57	14,714	83,909
2008	58	15,147	99,056
2009	59	15,306	114,362
2010	60	15,494	129,856
2011	61	15,574	145,430
2012	62	16,488	161,918
2013	63	16,488	178,406
2014	64	16,911	195,317
2015	65	17,328	212,645
2016	66	17,698	230,343
2017	67	18,231	248,574
2018	68	27,746	276,320
2019	69	28,579	304,899
2020	70	29,072	333,971
2021	71	29,000	362,971
2022	72	28,929	391,900
2023	73	28,857	420,757
2024	74	28,785	449,542
2025	75	28,714	478,256
2026	76	28,643	506,899
2027	77	28,572	535,471
2028	78	28,501	563,972
2029	79	28,431	592,403
2030	80	28,361	620,764
2031	81	28,291	649,055
2032	82	28,221	677,276
2033	83	28,152	705,428
2034	84	6,215	\$711,643
	LAROCQUE		\$711,643

LOSS OF PAST VALUE OF LIFE TO JUDITH
2001 - 2019

YEAR	AGE	LVL	CUMULATE
*****	***	*****	*****
2001	51	\$29,936	\$29,936
2002	52	100,782	130,718
2003	53	102,677	233,395
2004	54	106,024	339,419
2005	55	109,650	449,069
2006	56	112,436	561,505
2007	57	117,023	678,528
2008	58	117,128	795,656
2009	59	120,314	915,970
2010	60	122,119	1,038,089
2011	61	125,734	1,163,823
2012	62	127,921	1,291,744
2013	63	129,840	1,421,584
2014	64	130,827	1,552,411
2015	65	131,782	1,684,193
2016	66	134,510	1,818,703
2017	67	137,348	1,956,051
2018	68	139,971	2,096,022
2019	69	142,771	\$2,238,793

LAROCQUE \$2,238,793

PRESENT VALUE OF FUTURE VALUE OF LIFE TO JUDITH
2020 - 2034

YEAR	AGE	LVL	DISCOUNT FACTOR	PRESENT VALUE	CUMULATE
****	***	*****	*****	*****	*****
2020	70	\$145,626	0.98765	\$143,828	\$143,828
2021	71	145,626	0.97546	142,052	285,880
2022	72	145,626	0.96342	140,299	426,179
2023	73	145,626	0.95152	138,566	564,745
2024	74	145,626	0.93978	136,856	701,601
2025	75	145,626	0.92817	135,166	836,767
2026	76	145,626	0.91672	133,498	970,265
2027	77	145,626	0.90540	131,850	1,102,115
2028	78	145,626	0.89422	130,222	1,232,337
2029	79	145,626	0.88318	128,614	1,360,951
2030	80	145,626	0.87228	127,027	1,487,978
2031	81	145,626	0.86151	125,458	1,613,436
2032	82	145,626	0.85087	123,909	1,737,345
2033	83	145,626	0.84037	122,380	1,859,725
2034	84	31,918	0.83807	26,750	\$1,886,475

JUDITH LAROCQUE \$1,886,475

PRESENT VALUE OF NET VALUE OF LIFE TO JUDITH
2001 - 2034

YEAR	AGE	LVL	CUMULATE
*****	***	*****	*****
2001	51	\$29,936	\$29,936
2002	52	100,782	130,718
2003	53	102,677	233,395
2004	54	106,024	339,419
2005	55	109,650	449,069
2006	56	112,436	561,505
2007	57	117,023	678,528
2008	58	117,128	795,656
2009	59	120,314	915,970
2010	60	122,119	1,038,089
2011	61	125,734	1,163,823
2012	62	127,921	1,291,744
2013	63	129,840	1,421,584
2014	64	130,827	1,552,411
2015	65	131,782	1,684,193
2016	66	134,510	1,818,703
2017	67	137,348	1,956,051
2018	68	139,971	2,096,022
2019	69	142,771	2,238,793
2020	70	143,828	2,382,621
2021	71	142,052	2,524,673
2022	72	140,299	2,664,972
2023	73	138,566	2,803,538
2024	74	136,856	2,940,394
2025	75	135,166	3,075,560
2026	76	133,498	3,209,058
2027	77	131,850	3,340,908
2028	78	130,222	3,471,130
2029	79	128,614	3,599,744
2030	80	127,027	3,726,771
2031	81	125,458	3,852,229
2032	82	123,909	3,976,138
2033	83	122,380	4,098,518
2034	84	26,750	\$4,125,268

LAROCQUE \$4,125,268